B. PHARM.

(SEM. IV) EXAMINATION, 2006-07

PHARMACEUTICAL MICROBIOLOGY

Time : 3 Hours] [Total Marks : 80

Note : (1) Answer all questions.
       (2) All questions carry equal marks.

1 Answer any four : 4x4
   (a) Describe the structure of capsules in bacteria. What are their functions?
   (b) Discuss the general structure of a bacterial cell, with the help of a labelled diagram.
   (c) Give one method of classification of bacteria, giving examples.
   (d) Discuss the scope of industrial microbiology.
   (e) How is an endospore formed in bacteria? How does it differ from an exospore?

2 Answer any four : 4x4
   (a) Describe acid fast staining of bacteria.
   (b) Discuss the principle of Transmission Electron Microscope (TEM) with the help of a working diagram.
   (c) Discuss the cultivation of viruses using tissue culture technique.
   (d) Describe the conditions/methods for cultivation of anaerobic bacteria.

V-5053] 1 [Contd...
(e) Classify the methods of isolation of bacteria and
discuss any one of them.

3 Answer any four:
(a) Describe the method A as test procedure in
official tests for sterility.
(b) Describe the bacteriological media and test-
organisms used in official tests for sterility.
(c) Discuss a method for selecting recombinant
bacteria.
(d) Discuss the production of monoclonal antibodies.
(e) Define mutation. How do mutations occur in
bacteria?

4 Answer any two:
(a) Discuss the influence of the following factors
on efficiency of a disinfectant:
   (i) Concentration of disinfectant
   (ii) Temperature
   Discuss the merits and demerits of phenol
   coefficient tests.
(b) Discuss the principle, construction and working
of a Wet-Heat sterilizer. What are its
   applications?
(c) Classify disinfectants giving examples. Describe
   the characteristics of various types of bacteria-
   proof filter media, giving examples.

5 Write notes on any four:
(a) Principle of microbiological assay of vitamins
(b) Endotoxins
(c) External Defense Mechanisms
(d) Phagocytosis
(e) Complement system

V-5053] 2 [ 350 ]